

Appl. No. 10/626,929
Response Dated April 12, 2005
Reply to Restriction Requirement dated January 19, 2005

Remarks/Arguments

Applicant has received and carefully reviewed the Office Action of the Examiner mailed January 19, 2005. Claims 1-25 and 32-35 remain pending. Claims 10, 15, and 16 have been amended. Support for the amendments is found in the specification, claims, and drawings as originally filed. No new matter has been added. Reconsideration and reexamination are respectfully requested.

Rejection under 35 U.S.C. § 103

Claims 1-14, 17-25, and 32-35 are rejected as being unpatentable over Gauthier US 5,911,747). The Examiner asserts that Gauthier discloses the invention except that Gauthier discloses increasing the minimum on time with a variable increase instead of a fixed amount as is recited in the claims. The Examiner asserts that the amount of increase is considered to have been an obvious engineering determination based upon the specific system and environmental conditions of the system being controlled. Applicant respectfully traverses the rejection.

The above claims recite a method and controller for controlling an air conditioner involving the steps of:

determining if the humidity level in the inside space is above a predetermined humidity level; and
increasing the minimum "on" time of the air conditioner if the humidity level is above the predetermined humidity level

(emphasis added). Applicants wish to point out that the claims do not recite increasing the minimum on time by a fixed amount as asserted by the Examiner. Gauthier actually discloses a system and method in which the minimum run time of the air conditioner is adjusted when the humidity is below a predetermined level.

Referring to the flow chart in FIGS. 6A-6C and the text from column 12, line 39 to column 13, line 65, Gauthier teaches initially setting the minimum run timer to 4 minutes at step 226 and initiating cooling at step 230. If the air supply temperature is greater than a minimum

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setpoint (step 232), if the change in air supply temperature is less than during the last sample period (step 234), and the air supply temperature change is less than a setpoint (step 238), the humidity is measured (step 240). If the humidity is above the maximum limit, Gauthier teaches the system should wait 15 seconds and returning to step 232 where the air supply temperature is again measured. If the humidity is less than the maximum limit, Gauthier teaches inquiring whether or not 2nd stage cooling is required (step 242), and if not, determining if the call for cooling is satisfied (step 244), and if the minimum run timer has been satisfied (step 256), then the minimum run time is increased to 8 minutes (step 262). Gauthier thus teaches increasing the minimum "on" time of the air conditioner if the humidity level is below the predetermined level, and not "if the humidity level is above the predetermined humidity level" as recited in claim 1. In the system and method illustrated in FIGS. 6A-6D of Gauthier, there does not appear to be any way to reach the steps of increasing the minimum "on" time (steps 262, 266) when the humidity level is above a predetermined level.

Additionally, there is no motivation for one of ordinary skill in the art to modify the system and method of Gauthier to do the opposite of what Gauthier teaches, and adjust the minimum "on" time when the humidity is higher than the maximum limit because Gauthier specifically teaches that "[c]ooling will thus continue at maximum output during high humidity periods." see column 13, lines 19-21. As Gauthier does not appear to teach the basic elements of independent claim 1, claim 1 is believed to be clearly patentable over Gauthier. For similar and other reasons, claims 2-14, 17-25, and 32-35 are also believed to be clearly patentable over Gauthier. Withdrawal of the rejection is respectfully requested.

Claims 15 and 16 are rejected as being unpatentable over Fukumoto et al. (US 4,540,040). The Examiner asserts that Fukumoto et al. disclose the invention as claimed except for having an automatic humidity regulator respond to a given humidity level. The Examiner asserts that such a modification to the system of Fukumoto et al. would have been obvious because that is the conventional manner in which automatic humidity regulators operate. Applicant respectfully traverses the rejection.

Independent claim 15, as amended, recites the steps of determining if the humidity level

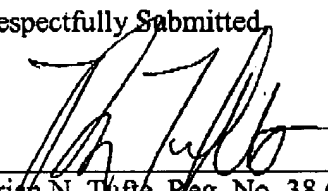
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in the inside space is above a predetermined level and increasing the "on" time of the duty cycle for the air conditioner. Fukumoto et al. teach reducing the "on" time of the duty cycle of a car air conditioner to save power. See column 3, lines 54-64. Because Fukumoto et al. is directed to reducing power consumption by reducing the air conditioner duty cycle, there is no motivation for one of ordinary skill in the art to do the opposite of what Fukumoto et al. teach. Fukumoto et al. thus do not appear to teach or suggest the elements of the claims. Withdrawal of the rejection is respectfully requested.

Reconsideration and reexamination are respectfully requested. It is submitted that, in light of the above remarks, all pending claims 1-25 and 32-35 are now in condition for allowance. If a telephone interview would be of assistance, please contact the undersigned attorney at 612-359-9348.

Respectfully Submitted

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